

THE ZOOLOGIST.

THIRD SERIES.

VOL. XII.]

MARCH, 1888.

[No. 135.]

ORNITHOLOGICAL NOTES FROM NORFOLK.

By J. H. GURNEY, JUN., F.Z.S.

IF Norfolk has not produced any startling novelties during the twelve months which have just elapsed, it has at all events maintained its character as a great resort of migratory birds, and the side of the county to which these notes chiefly refer has had its fair share of them.

The wind, which so materially affects the movements of migratory birds, blew persistently from the east in the spring, and still more steadily from the west in autumn. No one who has paid attention to the subject can have failed to observe that the feathered visitants to this county will always, if possible, fly against the wind. According to Mr. Preston's annual return, we had twenty-one days of west wind in October—a sufficient reason for the east-to-west migration of Woodcocks, Hooded Crows, Redwings, and Larks, which as usual marked November. If it had been for the same period in the east we should not have seen a tithe of them. There was a gale on October 30th, but both autumn and winter were free from destructive winds.

I have long thought that the subject of migration over the North Sea is complicated by the frequent passage, and return passage, *between tides*, of many species of Grallatorial birds from the estuaries and mud-flats of England to Holland. Dr. Jenner, on the authority of the Rev. N. Thornbury, has noted daily excursions from Holland to Norfolk made by tame Pigeons. It is easy to show the possibility of both Waders and Pigeons



crossing and returning from shore to shore in a very short time if there be very little wind. Mr. Tegetmeier says the speed of a Pigeon, flying under favourable circumstances, is from fifty to sixty miles an hour ('The Field,' August 25th, 1883), and he considers the rate of flight of a wild Rock Dove and a Homing Pigeon to be about the same.* If Pigeons can fly at fifty miles an hour, Curlews, Knots, and Dunlins can fly at forty. From Norfolk to Holland is little over a hundred miles. Given a suitable day, and a head wind or no wind, two and a half hours would suffice to transport a bird from shore to shore. I have often at Blakeney Harbour, on the coast of Norfolk, observed that many (occasionally almost all) of such species as the Dunlin, Knot, Turnstone, Whimbrel, and Curlew disappear at high tide, having been abundant a few hours before when the tide was low, and a search along the shore has failed to reveal any trace of them. The same has been noticed at Breydon, near Yarmouth.† But this is merely a suggestion, for inasmuch as there is a difference of two hours between high tide at King's Lynn and Great Yarmouth, they may merely move from Blakeney to one or other of these places. According to a "time-table" which I have consulted, there is about the same difference between Yarmouth and Heligoland.

A young Sea Eagle, *Haliaeetus albicilla*, was shot on Nov. 16th at Hoveton, and stuffed by Mr. J. A. Cole, who found it to be a male on dissection. It had been seen in the neighbourhood for a week or more, and was shot in a field by the railway.

On Sept. 15th, the keeper of Cromer lighthouse discovered by the light of his lamps, at three o'clock in the morning, an adult Osprey, *Pandion haliaetus*, perched on the flagstaff which stands about fifty yards from the lighthouse. His assistant shot

* This opinion he has doubtless seen reason to modify in consequence of the more recent experiments made by Mr. Griffiths, from which it appeared that the average speed of Partridges and Pigeons is about thirty-seven miles an hour. See 'The Field,' Feb. 19th, 1887.—Ed.

† It does not follow from the disappearance of the birds from the shore at high tide that they cross to Holland, though possibly some may do so. At Breydon Harbour, as well as on the coasts of Essex, Kent, and Sussex, we have repeatedly at high tide found them in the marshes, or resting in close order on the dry shingle beaches.—Ed.

it, and it was taken to my father the same afternoon. It had probably been attracted by the light.

On May 26th, a female Sparrowhawk, *Accipiter nisus*, allowed herself to be caught with the hand while sitting on four eggs, which were hard set, but not at the point of hatching. A somewhat similar case of a Sparrowhawk allowing herself to be touched on a cold winter's night happened to Mr. E. C. Phillips (Zool. 1881, p. 407).

About the end of November five live Barn Owls, *Strix flammea*, were brought to my father from Gunton, two of which had been taken out of a hollow tree, and three caught in a pole-trap. The keeper who caught them stated that he had recently taken fourteen others in the same trap. There are several manors in Norfolk where a Barn Owl is never intentionally killed; there are, unfortunately, a still greater number where the birds are indiscriminately slaughtered. Tubs have been put up for them at Northrepps for years. On one occasion, having taken ninety-eight pellets out, I had the curiosity to have them soaked in water, when they yielded twenty-one small birds, all Sparrows or Finches, eight Rats, many Field Mice, and a few Shrews. On another occasion the same tub yielded remains of a Thrush, eight young Rats, one Shrew, and about twenty Field Mice; and on another, one bird (apparently a Thrush), six young Rats, four Shrews, and three Field Mice. This gives a pretty good idea of their general food, and never on any occasion was any trace of game met with. The Norwich birdstuffers say the taste for Barn Owls is dying out; they used to receive a great number, now Kingfishers and Squirrels are all the rage. I fear this is from no spirit of leniency to the Owls, but because they are getting really scarce. In days when they were plentiful, I have counted nearly fifty Barn Owls in a Norfolk birdstuffer's shop, but hope never to see such a sight again. Four of the Owls above mentioned were turned out at Keswick, and a few days afterwards one of them was found clinging to a pony's tail, quite dead! the pony having most probably lain on the Owl, or trodden upon it, when its long shaggy tail was the most likely thing for the death-grip of those sharp claws to fix in.

Mr. G. Smith, of Great Yarmouth, writes that on January 6th, thousands of Redwings, Fieldfares, Missel Thrushes, Larks, and Linnets were passing Yarmouth, that the flight lasted all day,

and that the birdcatchers soon had their cages full, and had to "take up" and go home. Next day he noticed the churchyard full of Redwings. On Jan. 10th I found among the scrubby salt-wort bushes which border the sea at Blakeney a good many Redwings, too feeble to keep up with the advanced guard, and a few Blackbirds and a Thrush with them. The Blackbird certainly stands frost and snow better than any of the Thrush family; but they all seem to be aware that the vicinity of the sea thaws the ground a little, and that there, if anywhere, is a chance for procuring food.

Mr. Smith reports that on July 29th hundreds of Swifts were seen going south at Yarmouth, flying only three or four feet from the ground. As late as Nov. 3rd a dozen or twenty House Martins were flying high at Keswick.

A great number of Greenfinches came on board the *Leman* and *Ower* light-vessel on the afternoon of October 26th. Some died, and the next morning the rest joined some passing Rooks and flew away to the N.W. The mate forwarded a wing for identification, as he was not sure of the species.

On January 31st, Mr. Lowne received from a bird-fancier in Yarmouth a Serin supposed to have been caught on the denes; but winter is a most unlikely time of the year at which to find any species here which breeds to the south of us. The specimen in question is recorded in the 'Transactions of the Norfolk and Norwich Naturalists' Society,' under date Feb. 5th (pp. 392, 432).

In 'The Zoologist' for 1885 (p. 67) it is stated to be unusual for Tree Sparrows to nest under tiled roofs. About two dozen nestlings of this species were taken in the summer of 1887 from the roof of a cottage in Keswick which stands near a river, and some old ones were shot at the same time. It is evidently increasing in numbers in the Eastern Counties.

About the last day of the year a small yew bush was clipped at Horstead Hall, and a few of the twigs were left under the bush. A covey of Partridges had been in the habit of feeding on the lawn, and on the following day the gardener found five of them dead in the vicinity of the bush; the crops were all examined and contained yew leaves. There was snow on the ground at the time, which perhaps prevented the birds from getting their usual food, but I never before heard of birds being poisoned by yew; indeed the red berries are eaten greedily by various kinds,

and even by men, with impunity. The poison lies in the leaf, especially when it is a little sear.*

A Lapwing shot near Yarmouth in May had an unusually fine crest, the longest feathers measuring $5\frac{1}{4}$ inches, and the next $4\frac{1}{2}$ inches. I have shot one with a crest 4 inches long, but never saw one equal the first mentioned bird, which is quite unique in its way.

A Redshank, *Totanus calidris*, was shot at Cley, on Sept. 13th, which had an occipital tuft, or crest, of feathers half an inch in length. This singular growth was pure white, and composed of about fifteen feathers; there was apparently no injury of any kind under the skin, and the bird was in excellent condition. Some years ago there appeared in 'The Field' a figure of the head of a Golden Plover which had been shot in Tipperary, and which had a considerably developed occipital crest. In the Norwich Museum there is a Sparrow with a similar growth, and a Wood Pigeon with a crest three-fourths of an inch high has also been reported (Zool 1881, p. 332).

The extraordinary number of Little Stints and Pigmy Curlews at Cley and other places on the Norfolk Coast at the beginning of September last was quite unprecedented, but only young birds were obtained. A season which produces one of these species in abundance generally produces the other, but it is six years since any considerable number of these birds appeared. For a week or two anyone who wanted specimens had only to go to the mud-flats; but they decreased in numbers towards the end of the month, and soon all had passed on. About Cley, on Sept. 14th, were two or three Temminck's Stints, but, although I was on the shore there, they did not come my way. Mr. Dack, however, shot one.

Grey Plovers were unusually abundant throughout the autumn, and Knots were more plentiful at Cley and at other places along the coast than they had been for years. Forty-seven were killed on one day by Mr. A. B. Farn and some friends, and I met with a great many myself. Mr. O. V. Aplin, who was staying at Cley from October 4th to the 14th, described them as being then much less plentiful. On the other side of the county,

* Several instances have been reported of Pheasants being poisoned by yew. See 'The Field,' Nov. 25th and Dec. 2nd, 1876.—Ed.

Mr. H. A. Macpherson saw a Knot, "in full breeding plumage," and some Dunlin and Ringed Plover, on Stamford Mere,—a locality twenty-five miles from the sea,—on the 23rd of May.

Mr. G. Smith informs me that a Pectoral Sandpiper, *Tringa maculata*, Vieillot, was shot on the Bure marshes, near Yarmouth, on Sept. 8th, and is now in the collection of Mr. R. W. Chase, who has already recorded it (Zool. 1887, p. 433). On Sept. 24th I picked up, at one of our poulterers, a Solitary Snipe sent from Blickling; from the dark colour of the back it appeared to be an adult bird, as was another sent to Mr. Gunn from Barton.

Mr. Southwell obtained a good view of a Spoonbill, *Platalea leucorodia*, at Cley, on July 19th, and as neither of us ever heard of its capture it is to be hoped that it escaped destruction. One evening, about the first week of July, Mr. W. B. Monement saw a curious bird sitting on the roof of a building used as a studio in the village of Weybourne, three-quarters of a mile from the sea; it proved on being shot to be an immature Night Heron. On June 30th a pair were released by Lord Lilford at Lilford Hall, and, as the distance is not much over sixty miles, it is probable that this was one of them.

A Pink-footed Goose, which had evidently been shot in the wing, was picked up on the shore at Overstrand on December 20th, and taken to my father. Though very thin and wasted, it soon got better on his pond. Three or four others were killed in the county between that date and Christmas.

Mr. Cordeaux wrote that he received from Cromer Lighthouse the wing of a Tufted Duck, which had struck against it on November 18th; some were offered in Norwich Market during the same month. Two Shovellers were shot at Hempstead in December, and one or two others seen. Colonel Feilden found a young Glaucous Gull and a Guillemot dead on the shore at Wells on October 19th. Eight Great Crested Grebes and two Red-necked ones were hanging up in Leadenhall Market on November 21st, and were said to have come from Norfolk.

WOLVES NURTURING CHILDREN IN THEIR DENS.

A RECENT enquiry for information on this subject has led to a fruitless search in a great number of books for some trustworthy account of what has been hinted at and believed in by many people since the days of Romulus and Remus, but concerning which there appears to be very little reliable evidence on record. The best account we have been able to find is contained in a pamphlet printed at Plymouth in 1852, with the following title: “‘An Account of Wolves nurturing Children in their Dens.’ By an Indian Official. Plymouth: Jenkin Thomas, Printer, 9, Cornwall Street, 1852.” A copy of this pamphlet, long out of print, and now very scarce, is in the Zoological Library of the Natural History Museum at South Kensington, and on the wrapper of this, in the handwriting of the late Colonel Hamilton Smith, is the following important memorandum:—“This account, I am informed by friends, is written by Colonel Sleeman of the Indian Army, the well-known officer who had charge of the Thugg enquiries, and who resided long in the forests of India.” This endorsement adds value to the account which deserves to be rescued from oblivion, and which is accordingly here reprinted to ensure a more permanent record of the facts narrated than is afforded by the precarious existence of a pamphlet now so difficult to procure.—Ed.]

WOLVES are numerous in the neighbourhood of Sultanpoor, and, indeed, all along the banks of the Goomtree river, among the ravines that intersect them; and a great many children are carried off by them from towns, villages and camps. It is exceedingly difficult to catch them, and hardly any of the Hindoo population, save those of the very lowest class, who live a vagrant life and bivouac in the jungles, or in the suburbs of towns and villages, will attempt to catch or kill them. All other Hindoos have a superstitious dread of destroying or even injuring them; and a village community, within the boundary of whose lands a drop of wolf's blood has fallen, believes itself doomed to destruction. The class of little vagrant communities, above-mentioned, who have no superstitious dread of destroying any living thing, eat jackalls and all kinds of reptiles, and catch all kinds of animals, either to feed upon them themselves, or to sell them to those who wish to keep or hunt them.

But it is remarkable that they very seldom catch Wolves, though they know all their dens, and could easily dig them out as they dig out other animals. This is supposed to arise from the profit which they make by the gold and silver bracelets, necklaces,

and other ornaments, which are worn by the children, whom the Wolves carry to their dens and devour, and are left at the entrance of these dens. A party of these men lately brought to our camp alive a very large Hyæna, which was let loose, and hunted down by European officers and the clerks of my office. One of the officers asked them whether this were not the reason why they did not bring Wolves to the camp, to be hunted down in the same way, since officers would give more for brutes that ate children than for such as fed only on dogs or carrion. They dared not deny, though they were afraid or ashamed to acknowledge that it was; I have myself no doubt that this is the reason, and that they do make a good deal in this way, from the children's ornaments, which they find at the entrance of the Wolves' dens. In every part of India a great number of children are every day murdered for the sake of their ornaments, and the fearful examples that come daily to the knowledge of parents, and the injunctions of the civil authorities, are unavailing against this desire to see their young children dressed out in gold and silver ornaments.

There is now (Feb. 1850) at Sultanpoor, a boy who was found alive in a Wolf's den, near Chandour, ten miles from Sultanpoor, about two years and a half ago. A trooper, sent by the native governor of the district to Chandour, to demand payment of some revenue, was passing along the bank of the river, near Chandour, about noon, when he saw a large female Wolf leave her den, followed by three whelps and a little boy. The boy went on all fours, and seemed to be on the best possible terms with the old dam and the three whelps, and the mother seemed to guard all four with equal care: they all went down to the river and drank, without perceiving the trooper, who sat upon his horse watching them; as soon as they were about to turn back, the trooper pushed on to cut off and secure the boy; but he ran as fast as the whelps could, and kept up with the old one. The ground was uneven, and the trooper's horse could not overtake them. They all entered the den, and the trooper assembled some people from Chandour with pickaxes, and dug into the den. When they had dug in about six or eight feet, the old Wolf bolted with her three whelps and the boy. The trooper mounted and pursued, followed by the fleetest young men of the party; and, as the ground over which they had to fly was more even, he

headed them, and turned the whelps and boy back upon the men on foot, who secured the boy, and let the old dam and her three cubs go on their way.

They took the boy to the village, but had to tie him, for he was very restive, and struggled hard to rush into every hole or den they came near. They tried to make him speak, but could get nothing from him but an angry growl or snarl. He was kept for several days at the village, and a large crowd assembled every day to see him. When a grown-up person came near him he became alarmed, and tried to steal away; but when a child came near him, he rushed at it with a fierce snarl, like that of a dog, and tried to bite it. When any cooked meat was put near him he rejected it in disgust; but when any raw meat was offered, he seized it with avidity, put it on the ground under his hands, like a dog, and ate it with evident pleasure. He would not let any one come near while he was eating, but he made no objection to a dog's coming, and sharing his food with him. The trooper remained with him four or five days, and then returned to the Governor, leaving the boy in charge to the Rajah of Hasunpoor. He related all that he had seen, and the boy was soon after sent to the European officer, commanding the First Regiment of Oude Local Infantry, at Sultanpoor, Captain Nicholetts, by order of the Rajah of Hasunpoor, who was at Chandour, and saw the boy when the trooper first brought him to the village. This account is taken from the Rajah's own report of what had taken place.

Captain Nicholetts made him over to the charge of his servants, who take great care of him, but can never get him to speak a word. He is very inoffensive except when teased (Captain Nicholetts says), and will then growl surlily at the person who teases him. He has come to eat anything that is thrown to him, but always prefers raw flesh, which he devours most greedily. He will drink a whole pitcher of butter-milk when put before him, without seeming to draw breath. He can never be induced to keep on any kind of clothing, even in the coldest weather. A quilt, stuffed with cotton, was given to him, when it became very cold this season, but he tore it to pieces, and ate a portion of it, cotton and all, with his bread every day. He is very fond of bones, particularly uncooked ones, which he masticates apparently with as much ease as meat. He has eaten half a lamb at a time without any apparent effort, and is very fond of

taking up earth and small stones and eating them. His features are coarse and his countenance repulsive, and he is very filthy in his habits. He continues to be fond of dogs and jackalls, and all other four-footed animals that come near him; and always allows them to feed with him if he happens to be eating when they approach.*

At Chupra, twenty miles east from Sultanpoor, lived a cultivator, with his wife and son, who was then three years of age. In March, 1843, the man went to cut his crop of wheat and pulse, and the woman took her basket, and went with him to glean, leading her son by the arm. The boy had lately recovered from a severe scald on the left knee, which he got in the cold weather, from tumbling into the fire, at which he had been warming himself, while his parents were at work. As the father was reaping, and the mother gleaning, the boy sat upon the grass. A Wolf

* Captain Nicholetts, in letters dated the 14th and 19th of September, 1850, tells me that the boy died in the latter end of August, and that he was never known to laugh or smile. He understood little of what was said to him, and seemed to take no notice of what was going on around him. He formed no attachment for any one, nor did he seem to care for any one. He never played with any of the children around him, or seemed anxious to do so. When not hungry, he used to sit petting or stroking a pariah, or vagrant dog, which he used to permit to feed out of the same dish with him. A short time before his death, Captain Nicholetts shot this dog, as he used to eat the greater part of the food given to the boy, who seemed, in consequence, to be getting thin. The boy did not seem to care, in the least, for the death of the dog. The parents recognised the boy when he was first found, Captain Nicholetts believes, but when they found him so stupid and insensible they left him to subsist upon charity. They have now left Hasunpoor, and the age of the boy, when carried off, cannot be ascertained; but he was, to all appearance, about nine or ten years of age when found (in Aug. 1874), and he lived about three years afterwards. He used signs when he wanted anything, and very few of them except when hungry, and he then pointed to his mouth. When his food was placed at some distance from him, he would run to it on all fours, like any four-footed animal, but at other times he would walk upright occasionally. He shunned human beings of all kinds, and would never willingly remain near one. To cold, heat, and rain he appeared to be indifferent, and he seemed to care for nothing but eating. He was very quiet, and required no kind of restraint after he was brought to Captain Nicholetts. He had lived with Captain Nicholetts' servants about two years, and was never heard to speak till within a few minutes of his death, when he put his hands to his head and said, "it ached," and asked for water. He drank it and died.

rushed upon him suddenly from behind a bush, caught him up by the loins, and made off with him towards the ravines. The father was at a distance at the time, but the mother followed, screaming as loud as she could for assistance. The people of the village ran to her aid, but they soon lost sight of the Wolf and his prey.

She heard nothing more of her boy for six years, and had, in that interval, lost her husband. At the end of that time, two sipahees came, in the month of February, 1849, from the town of Singramow, which is ten miles from Chupra, on the bank of the Khobae rivulet. While they sat on the border of the jungle, which extended down to the stream, watching for hogs, which commonly came down to drink at that time in the morning, they saw there three Wolf cubs and a boy come out from the jungle, and go down together to the stream to drink. The sipahees watched them till they had drank, and were about to return, when they rushed towards them. All four ran towards a den in the ravines. The sipahees followed as fast as they could, but the three cubs had got in before the sipahees could come up with them, and the boy was half way in, when one of the sipahees caught him by the hind leg and drew him back. He seemed very angry and ferocious, bit at them, and seized in his teeth the barrel of one of the guns which they put forward to keep him off, and shook it. They, however, secured him, brought him home, and kept him for twenty days. They could, for that time, make him eat nothing but raw flesh, and they fed him upon hares and birds. They found it difficult to provide him with sufficient food, and took him to the bazaar, in the village of Koeleepoor, and there let him go, to be fed by the charitable people of the place, till he might be recognised and claimed by his parents. One market-day, a man from the village of Chupra happened to see him in the bazaar, and on his return mentioned the circumstance to his neighbours. The poor cultivator's widow, on hearing this, asked him to describe the boy more minutely; when she found that the boy had the mark of a scald on the left knee, and three marks of the teeth of an animal on each side of his loins. The widow told him that her boy, when taken off, had lately recovered from a scald on the left knee, and was seized by the loins when the Wolf took him off, and that the boy he had seen must be her lost child.

She went off forthwith to the Koelee Bazaar, and, in addition to the two marks above-described, discovered a third mark on his thigh, with which her child was born. She took him home to her village, where he was recognised by all her neighbours. She kept him for two months, and all the sporting landowners in the neighbourhood sent her game for him to feed upon. He continued to dip his face in the water to drink, but he sucked in the water, and did not lap it up like a dog or wolf. His body continued to smell offensively. When the mother went to her work the boy always ran into the jungle, and she could never get him to speak. He followed his mother for what he could get to eat, but showed no particular affection for her, and she could never bring herself to feel much for him; and after two months, finding him of no use to her, and despairing of even making any thing of him, she left him to the common charity of the village. He soon after learnt to eat bread when it was given to him, and ate whatever else he could get during the day, but always went off to the jungle at night. He used to mutter something, but could never be got to articulate anything distinctly. The front of his knees and elbows had become hardened, from going on all-fours with the Wolves. If any clothes are put on him, he takes them off, and commonly tears them to pieces in doing so. He still prefers raw flesh to cooked, and feeds on carrion whenever he can get it. The boys of the village are in the habit of amusing themselves by catching frogs and throwing them to him, and he catches and eats them. When a bullock dies and the skin is removed, he goes and eats of it like a village dog. The boy is still in the village, and this is the description given of him by the mother herself, who still lives at Chupra. She has never experienced any return of affection for him, nor has he shown any such feeling for her. Her story is confirmed by all her neighbours, and by the head landholders, cultivators, and shopkeepers of the village.*

The Rajah of Hasunpoor Bundooa mentions, as a fact within his own knowledge, besides the others, for the truth of

* In November, 1850, Captain Nicholetts, on leaving the cantonments of Sultanpoor, where he commanded, ordered this boy to be sent to me, with his mother, but he got alarmed on the way, and ran to a jungle. He will no doubt find his way back soon if he lives.

which he vouches, that in the year 1843 a lad came to the town of Hasunpoor, who had evidently been brought up by Wolves. He seemed to be twelve years of age when he saw him; was very dark, and ate flesh, whether cooked or uncooked. He had short hair all over his body when he first came, but having, for a time, as the Rajah states, eaten salt with his food, like all other human beings, the hair, by degrees, disappeared. He could walk like other men on his legs, but could never be taught to speak. He would utter sounds like wild animals, and could be made to understand signs very well. He used to sit at a *bunnee*'s shop in the Bazaar, but was at last recognised by his parents, and taken off. What became of him afterwards he knows not. The Rajah's statement regarding this lad is confirmed by all the people of this town, but none of them know what afterwards became of him.

About the year 1843, a shepherd of the village of Ghutkoree, twelve miles west from the cantonments of Sultanpoor, saw a boy trotting along upon all-fours by the side of a Wolf, one morning as he was out with his flock. With great difficulty he caught the boy, who ran very fast, and brought him home. He fed him for some time, and tried to make him speak, and associate with men or boys, but he failed. He continued to be alarmed at the sight of men, but was brought to Colonel Gray, who commanded the First Oude Local Infantry at Sultanpoor. He and Mrs. Gray, and all the officers in cantonments, saw him often, and kept him for several days. But he soon after ran off into the jungle while the shepherd was asleep. The shepherd afterwards went to reside in another village, and I could not ascertain whether he ever recovered the boy or not.

Zolfukar Khan, a respectable landholder of Bankeepoor, in the estate of Hasunpoor, ten miles east from the Sultanpoor cantonments, mentions that about eight or nine years ago a trooper came to the town with a lad of about nine or ten years of age, whom he had rescued from Wolves among the ravines on the road; that he knew not what to do with him, and left him to the common charity of the village; that he ate everything offered to him, including bread, but before taking it, he carefully smelt at it, and always preferred undressed meat to everything else; that he walked on his legs like other people when he saw him, though there were evident signs, on his knees and

elbows, of his having gone very long on all-fours; and when asked to run on all-fours, he used to do so, and went so fast that no one could overtake him; how long he had been with the trooper, or how long it took him to learn to walk on his legs, he knows not. He could not talk or utter any very articulate sounds. He understood signs, and heard exceedingly well, and would assist the cultivators in turning trespassing cattle out of the fields when told by signs to do so. Boodhoo, a Brahmin cultivator of the village, took care of him, and he remained with him for three months, when he was claimed, and taken off by his father, a shepherd, who said that the boy was six years old when the Wolf took him off at night—some four years before. He did not like to leave Boodhoo. The Brahmin and the father were obliged to drag him away. What became of him afterwards he never heard. The lad had no hair upon his body, nor had he any dislike to wear clothes while he saw him. This statement was confirmed by the people of the village.

About seven years ago, a trooper belonging to the king, and in attendance upon Rajah Hurdut Sing, of Bondee, alias Bumnotee, on the left bank of the Ghagra river, in the Bahraetch district, was passing near a small stream which flows into that river, when he saw two Wolf cubs and a boy drinking in the stream. He had a man with him on foot, and they managed to seize the boy, who appeared to be ten years of age. He took him up on the pommel of his saddle, but he was so wild and fierce that he tore the trooper's clothes, and bit him severely in several places, though he had tied his hands together. He brought him to Bondee, where the Rajah had him tied up in his artillery gun-shed, and gave him raw flesh to eat; but he several times cut his ropes and ran off, and after three months the Rajah got tired of him and let him go. He was then taken by a Cashmeeree mimic or comedian (*bhand*), who fed and took care of him for six months; but at the end of that time he also got tired of him—for his habits were filthy—and let him go, to wander about the Bondee Bazaar. He one day ran off with a joint of meat from a butcher's shop, and soon after upset some things in the shop of a *bunneea*, who let fly an arrow at him. The arrow penetrated the boy's thigh. At this time, Sanaollah, a Cashmeer merchant of Lucknow, was at Bondee, selling some shawl goods to the Rajah, on the occasion of his brother's mar-

riage; he had many servants with him, and among them Janoo, a khidmutgar lad, and an old sipahee, named Ramzan Khan. Janoo took compassion upon the poor boy, extracted the arrow from his thigh, and had his wound dressed, and prepared a bed for him under the mango tree, where he himself lodged, but kept him tied to a tent-pin. He would at that time eat nothing but raw flesh. To wean him from this, Janoo, with the consent of his master, gave him rice and pulse to eat. He rejected them for several days, and ate nothing; but Janoo persevered, and by degrees made him eat the balls which he prepared for him; he was fourteen or fifteen days in bringing him to do this. The odour from his body was very offensive, and Janoo had him rubbed with mustard-seed, soaked in water, after the oil had been taken from it (*khullee*), in the hope of removing this smell. He continued this for some months, and fed him upon rice, pulse, and flour bread, but the odour did not leave him. He had hardened marks upon his knees and elbows, from having gone on all-fours. In about six weeks after he had been tied up under the tree, with a good deal of beating and rubbing of his joints with oil, he was made to stand and walk upon his legs like other human beings. He was never heard to utter more than one articulate sound, and that was "Aboodeea," the name of the little daughter of the Cashmeer mimic, who had treated him with kindness, and for whom he had shown some kind of attachment. In about four months he began to understand and obey signs. He was, by them, made to prepare the hookah, put lighted charcoal upon the tobacco, and bring it to Janoo, or present it to whomsoever he pointed out.

One night, while the boy was lying under the tree near Janoo, Janoo saw two Wolves come up stealthily and smell at the boy. They then touched him, and he got up; and instead of being frightened, the boy put his hands upon their heads, and they began to play with him. They capered around him, and he threw straw and leaves at them. Janoo tried to drive them off, but could not, and became much alarmed; and he called out to the sentry over the guns, Meer Akbur Allee, and told him that the Wolves were going to eat the boy. He replied, "come away, and leave him, or they will eat you also;" but when they saw them begin to play together his fears subsided, and he kept quiet. Gaining confidence by degrees, he drove them away; but

after going a little distance they returned, and began to play again with the boy. At last he succeeded in driving them off altogether. The night after three Wolves came, and the boy and they played together. A few nights after four Wolves came, but at no time did more than four come; they came four or five times, and Janoo had no longer any fear of them; and he thinks that the first two that came must have been the two cubs with which the boy was first found, and that they were prevented from seizing him by recognising the smell; they licked his face with their tongues as he put his hands on their heads.

Soon after, his master, Sanaollah, returned to Lucknow, and threatened Janoo to turn him out of his service, unless he let go the boy; he persisted in taking the boy with him, and his master relented. He had a string tied to his arm, and led him along by it, and put a bundle of clothes on his head. As they passed a jungle, the boy would throw down the bundle, and try to run into the jungle; but on being beaten, he would put up his hands in supplication, take up the bundle, and go on; but he soon seemed to forget the beating, and did the same thing at almost every jungle they came through. By degrees he became quite docile. Janoo was one day, about three months after their return to Lucknow, sent away by his master for a day or two on some business, and before his return the boy had gone off, and he could never find him again. About two months after the boy had gone, a woman, of the weaver cast, came with a letter from a relation of the Rajah, Hurdut Sing, to Sanaollah, stating that she resided in the village of Chureyrokotra, on his estate, and had had the son, then about four years of age, taken from her, about five or six years before, by a Wolf; and from the description which she gave of him, he, the Rajah's relation, thought he must be the boy whom his servant Janoo took away with him. She said that her boy had two marks upon him, one on the chest of a boil, and one of something else on the forehead; and as these marks corresponded precisely with those found upon the boy, neither she nor they had any doubt that he was her long lost son. She remained for four months with the merchant Sanaollah, and Janoo, his khidmutgar, at Lucknow; but the boy could not be found, and she returned home, praying that information might be sent to her should he be discovered. Sanaollah, Janoo, and Ramzan Khan, are still at Lucknow, and, before me,

all three declared all the circumstances here stated to be fully true. The boy was altogether about five months with Sanaollah and his servants from the time they got him; and he had been taken about four months and a half before. The Wolf must have had several litters of whelps during the last six or seven years that the boy was with her. Janoo further adds that he, after a month or two, ventured to try a waistband upon the boy, but he often tore it off in distress or anger. After he had become reconciled to this, in about two months he ventured to put upon him a vest and pair of trousers. He had great difficulty in making him keep them on, with threats and occasional beatings. He would disencumber himself of them whenever left alone, but put them on again in alarm when discovered; and, to the last, often injured or destroyed them, by rubbing them against trees or posts like a beast, when any part of his body was covered. This habit he could never break him of.*

It is remarkable that I can discover no well-established instance of a man who had been nurtured in a Wolf's den having been found. There is, in Lucknow, an old man, who was found in the Oude Tarae when a lad, by the hut of an old hermit, who had died. He is supposed to have been taken from Wolves by this hermit. The trooper who found him brought him to the king some forty years ago, and he has been ever since supported by the king comfortably. He is still called the "wild man of the woods." He was one day sent to me at my request, and I talked

* Rajah Hurdut Sewae, who is now in Lucknow on business, tells me (28th January, 1851) that the sowar brought the boy to Bondee, and there kept him for a short time as long as he remained; but as soon as he went off, the boy came to him, and he kept him for three months; that he appeared to him to be twelve years of age; that he ate raw meat as long as he remained with him, with evident pleasure whenever it was offered to him, but would not touch the bread and other dressed food put before him; that he went on all-fours, but would stand and go awkwardly on two legs when threatened, or made to do so; that he seemed to understand signs, but could not understand or utter a word; that he seldom attempted to bite any one, nor did he tear the clothes that he put upon him; that Sanaollah, the Cashmeeree merchant, used at that time to come to him often with shawls for sale, and must have taken the boy away with him, but he does not recollect having given the boy to him. He says that he never himself sent any letter to Sanaollah with the mother of the boy, but his brother, or some other relation of his, may have written one for her.

with him ; his features indicate him to be one of the Tharoo tribe, who are found only in that forest. He is very inoffensive, but speaks little, and that little imperfectly ; and he is still impatient of intercourse with his fellow-men, particularly with such as are disposed to tease him with questions. I asked him whether he had any recollection of having been with Wolves ; he said, " the Wolf died long before the old hermit ;" but he seemed to recollect nothing more, and there is no mark on his knees or elbows, to indicate that he ever went on all-fours. That he was found as a wild boy in the forest there can be no doubt ; but I do not feel at all sure that he ever lived with Wolves. From what I have seen and heard, I should doubt that any boy who had been many years with Wolves, up to the age of eight or ten, could ever attain the average intellect of men. I have never heard of a man who had been spared and nurtured by Wolves, having been found ; and as many boys have been recovered from Wolves, after they had been many years with them, we must conclude that, after a time, they either die from living exclusively on animal food, before they attain the age of manhood, or are destroyed by the Wolves themselves, or other beasts of prey in the jungles, from whom they are unable to escape, like the Wolves themselves, from want of the same speed. The Wolf or Wolves, by whom they have been spared and nurtured, must die, or be destroyed in a few years ; and other Wolves may kill and eat them. Tigers generally feed for two or three days upon the bullock they kill, and remain all the time, when not feeding, concealed in the vicinity ; if they found such a boy feeding upon their prey, they would certainly kill him, and most likely eat him. If such a boy passed such a dead body, he would certainly feed upon it. Tigers often spring upon and kill dogs and wolves thus found feeding upon their prey. They could more easily kill boys, and would certainly be more disposed to eat them. If the dead body of such a boy were found any where in jungles, or on the plains, it would excite little interest, where dead bodies are so often found exposed, and so soon eaten by dogs, jackalls, vultures, &c., &c., and would scarcely ever lead to any particular inquiry.

NOTES AND QUERIES.

Memoir of the late Mr. G. R. Waterhouse.—A well-known name has been removed from the roll of living naturalists by the recent death of Mr. George Robert Waterhouse. Born at Somers Town on March 6th, 1810, he commenced his career as an architect, for which profession he had been educated; devoting his spare time to the study of Natural History, some articles in the 'Penny Cyclopædia' on Fishes and Insects being among his earliest writings. In 1833 the Entomological Society of London was founded, with Mr. Waterhouse as its first Curator, and with his decease that Society loses the last of those who were present at its first meeting. In 1835 he accepted the appointment of Curator to the Museum of the Royal Institute at Liverpool, which appointment he in little more than a year exchanged for the Curatorship to the Zoological Society of London. By the spring of the following year he had prepared a Catalogue of the Mammals in the Museum. This, however, was not published until 1838, owing to his having introduced his own classification, which was strongly opposed by some members of the Museum Committee, who clung to the quinary system hitherto adopted in the arrangement. About this time he wrote the volume on Marsupials in Sir W. Jardine's 'Naturalist's Library,' and also the account of the Mammals collected by Darwin during the voyage of H.M.S. 'Beagle,' as well as several papers on the Coleoptera collected during the same voyage, including an account of the Coleoptera of the Galapagos Islands. In November, 1843, he was appointed an Assistant in the Geological Department in the British Museum; and in 1844 commenced his work the 'Natural History of Mammalia,' which occupied all his available spare time until the completion of the second volume in 1848, when, chiefly owing to the outbreak of the French Revolution, the publisher was unable to continue the work. He was President of the Entomological Society in 1849 and in 1850, and in the latter year he had the honour of being elected an Honorary Fellow of the Zoological Society. In December, 1851, he succeeded Mr. König as Keeper of the Mineralogical Branch of the Natural History Department in the British Museum, the geological collections being at that time associated with the minerals. In 1855 he prepared an article on the geographical distribution of the Rodentia for Keith Johnston's 'Physical Atlas.' From 1858 until 1861 he was engaged in the preparation of his 'Catalogue of British Coleoptera,' which gave such an impetus to the study of this order of insects among English entomologists. He was Vice-President of the Zoological Society in 1862-3. Besides the works already alluded to, he was the author of some 120 articles in various scientific journals. He was an excellent draughtsman, many of his papers being illustrated by himself. Latterly he occupied himself with literary

researches, and in his official capacity was much engaged in the preparation for the removal to South Kensington of the Geological Collections, which since 1857 had been separated from the minerals. By his advice, which his early training as an architect qualified him to give, the basement and ground-floors of the right wing of the new Museum were considerably modified so as to increase the accommodation for the collections. This work harassed him much, and feeling unequal to the anxiety consequent on the approaching removal he resigned his appointment in 1880. In 1885 he had a paralytic stroke, from which he never entirely recovered, and died Jan. 21st, 1888, in his seventy-eighth year.

The use of the word "feral."—If "English as she is spoke" is to be reduced to those words only which are correctly formed, the language will suffer a considerable diminution, but in many cases undoubtedly no loss. However, the elimination of the word "feral," on whatever ground, until some other conveying precisely the same meaning be introduced and accepted, would be a serious deprivation to naturalists; and before parting with it the subject needs calm consideration from more than one point of view. "Colonist," as suggested by Mr. Slater (*suprà* p. 64), would not at all meet the requirements of the case. It might apply in New Zealand to *Zosterops lateralis*, which has lately of its own accord settled in that country, but to few more—certainly not to the numerous animals of species once domesticated that have, so far as circumstances permit, resumed in new lands the habits of their wild and remote ancestors. The first application of the word to animals under these conditions, and to such animals alone, seems due to Colonel Hamilton Smith, who, writing in 1839 of wild Dogs and Dogs that had run wild, says:—"On this subject our language is deficient in a sufficiently correct terminology. The French have adopted a clear distinction, by naming the dog considered as a genuine wild species, *wild dog* (*chien sauvage*), and the dog run wild from a domestic state (*chien maron*), *maroon dog*, or more properly, perhaps, *errant dog*; but as this word is again a Gallicism, it might be better to adopt a native term and call it *Feral dog*." (Naturalist's Library, Mammalia, vol. ix. pp. 91, 92). This suggestion, as everyone knows, has been generally adopted by zoological writers, to the great convenience of all concerned. If occasionally, as would seem lately to have happened, some one has used the word in a wrong sense the blame lies with him and not with the word. Though Colonel Smith does not expressly give the derivation, the context evidently shows that he had the Latin *fera* in his mind, and therefore "feral" is as well formed an English adjective as are many others in constant use. But then it is objected that there is no Latin word *feralis* from *fera*, as there ought to be, while there is a Latin word *feralis* with a wholly different meaning and derivation. The existence of the last is undoubted; but then we must please to remember that this is *fēralis* with the first vowel long, while if there

were an adjective from *fera* it would be *fěralis* with the first vowel short, and that in Latin, as in other languages, we may have two words absolutely alike in spelling, but differing in pronunciation, meaning, and derivation—witness *pōpulus*, a poplar tree, and *pōpulus*, the people. Moreover, though *fěralis*, with the short vowel, may not be found in writings that have come down to us, we certainly have (not, I admit, in what is called classical Latin, but for all that in Latin) the adverb *feraliter*, as Mr. Wharton has already pointed out (*suprà* p. 19), and explained, as he says, by Du Cange as *ferarum more*, “in the manner of wild beasts.” In this Du Cange is supported by Facciolati, while Adelung goes even further and recognises a Latin adjective *feralis*, which he translates by the German *wild*, *grausam*, and then adds, naturally enough, *iōdtlich*, *traurig*. A man must be confident of his scholarship who demurs to these three authorities. I have had, however, the curiosity to examine the passages cited by Du Cange in support of his rendering. They are three in number, one from the Benedictine Annals (iv. p. 577) may be ambiguous, but another, and the earliest, from Fulgentius, who died A. D. 550, and wrote “*Dum enim amor noviter venit, ut leo feraliter invadit*” (Mythol. lib. iii. 1), seems to show that the lion’s onset was merely “in the manner of a wild beast,” and not necessarily “fatal”).* The third passage, however, I hold to be conclusive. It is from the Pisan Chronicle (as given by Muratorius (vi. col. 105), and runs thus:—“*contra Pisanos fremebant illico feraliter et dentibus frendebant*”—i. e., “There they roared against the people of Pisa in the manner of wild beasts and gnashed with their teeth.” To translate *feraliter* in this sentence by “fatally” would be to spoil the metaphor, and quite inadmissible. I am all for purity of language, but those who object to “feral” must be very careful how they write. To be consistent they must never use “biology” in the sense generally attached to it; “binomial” and “terminology” must be still more hateful, and they had better beware of “avine” or “avian”—both of which I observe are creeping into use. I trust they will at least avoid the still more barbarous phrase of “collecting a specimen” and then of “sexing” it. For my own part I feel indebted to Colonel Hamilton Smith not only for giving us a word that was very much wanted, without which, indeed, we could not conveniently get on, but, as I consider, for making that word exactly what it ought to be. The beasts to which it applies are not truly wild, yet they live “in the manner of wild beasts”—they are “feral” not “ferine”; but by all means in pronunciation let us keep the first vowel short, and we shall then be able to read our Blyth, our Darwin, and I know not how many other writers, with no fear of “fatal” effects.—ALFRED NEWTON (Magdalene College, Cambridge, Feb. 4).

* This is the more important, since modern dictionary-makers refer to Fulgentius, apparently without having looked at the passage, and translate the word “fatally.”

Definition of the term "British" as applied to the Marine Fauna and Flora.—A Committee of the British Association, consisting of Canon Norman, Mr. Brady, Mr. Carruthers, Prof. Herdman, Prof. M'Intosh, Mr. Murray, Prof. Newton, Mr. Sclater, and Prof. Haddon (Secretary), appointed for the purpose of considering the question of accurately defining the term "British" as applied to the Marine Fauna and Flora of our Islands, reported as follows:—"A circular giving in detail alternative boundaries for a British marine area, and maps and sections illustrating the same, were distributed to the members of the 'British Marine Area Committee,' as well as to a large and representative number of naturalists interested in marine zoology. As was to be expected, the replies showed that great diversity of opinion exists not only as to the desirability of limiting a British marine area, but also as to how far such an area should extend. A tabulation of the replies was subsequently forwarded to the members of the Committee, and the following statements appear to express the views of the majority:—It may be desirable, for the convenience of curators of museums and the compilers of faunistic works, to limit a marine area which may be more particularly described as 'British.' The British Marine Area may be conveniently subdivided into a shallow-water and into a deep-water district. The 100-fathom contour is a natural boundary line for the former off the north and west coasts of the British Islands for the following reasons: (1) It is defined on all charts; (2) The Admiralty soundings are very complete down to that depth; (3) The 100-fathom line roughly corresponds with the beginning of the declivity of the continental plateau; (4) There is a marked change in the fauna about that limit; (5) Most of the dredgings of British naturalists have been taken within that contour. The only boundary on the south and east is the half-way line between Great Britain and the Continent; this should include the Dogger Bank. The above district may be termed 'The British Marine Shallow-water District.' The deep water district of the British Marine Area may be regarded as extending from 107 to, say, 1000 fathoms—that is, to the commencement of the abysmal floor of the ocean. As these depths occur only off the north and west coasts, this region may be termed 'The British Atlantic Slope District.' The Channel Islands lie outside the British Marine Area proper."

Antiquity of the name "Lobster" for the Stoat.—In my note on this subject (p. 65) there is a misprint, which I should be glad to have corrected. For "vj corsspyll" read "vj coupyll blake conyes."—J. H. GURNEY (Northrepps Hall, Norwich).

MAMMALIA.

Equine Mules in Paris.—It may interest some of your readers if briefly describe the appearance of some equine Mules which I saw in

Paris during the autumn of last year. With two exceptions, noticed below, they were exhibited at the Jardin d'Acclimatation, at which place much attention is paid to hybridization, the results being very successful. I have compared my impressions of these Mules with the coloured plates of those figured in the 'Gleanings from the Menagerie at Knowsley,' and in order the better to identify those which I saw, I give the stud names. "Persans," a Mule between a Jack Ass and Zebra, is not so much striped as might have been expected, and in this respect resembles the figure in the 'Knowsley Menagerie,' the shoulder stripes and those on the legs being very well defined. "Neptune," a Mule between the Horse and Burchell's Zebra; in colour a bright bay; stripes on body very faint, shoulder stripe hardly visible; legs nearly black, with very faint indications of stripes; dorsal stripe well defined. "Fatima," a Mule between a white Egyptian Ass and Burchell's Zebra, characterised by three well-defined shoulder-stripes; otherwise very faintly marked; in the paucity of markings it agrees with a similar Mule figured in the 'Knowsley Menagerie'; the latter, however, has but one shoulder-stripe. A Mule between a Hemione, *Equus onager*, and Burchell's Zebra (Jardin des Plantes) is faintly striped over the face, fore part of the body, and legs to the hoofs; dorsal stripe very broad, and the colour from the middle of the body to the tail dappled. A Mule between a Hemione and a Tarbes mare (Jardin des Plantes): shoulder stripe absent; dorsal stripe broad, but faint; I could not perceive any sign of corns on the hind legs. "Sanspareille," Mule between a Hemione and Mare; a very beautiful animal, similar to the last named. "Catherine," an Arab Mule, remarkable for having produced foals both with the Horse and the Ass. [In the opinion of Mr. C. L. Sutherland, than whom there is no better authority on the subject, it is extremely doubtful whether this animal really is a Mule. Its history is not forthcoming, and if this were unimpeachable, Mr. Sutherland states that it would be the sole authenticated case of the kind which he has heard of in an experience of thirty years on the Continent of Europe and in the United States. He adds that in Poitou (where some 50,000 mares are kept for Mule breeding) all the experienced breeders disbelieved in this Parisian so-called fertile Mule, there being no record in Poitou of a female Mule having produced a foal.—ED.] "Kroumir" is a dark grey male Mule three-quarters horse. "Constantine" and "Hippone," two grey female Mules three-quarters horse; these three animals are so like horses that the difference can be perceived only by a very close scrutiny; the corns are plainly visible on the hind legs. "Salem," Mule from an Arab Mule and a white Egyptian Ass; this animal is nearly white, and closely resembles an Ass. "Athman," Mule from an Ass and fertile Mule (?); a darker animal than the last-named, and more closely resembling an Ass.—J. JENNER WEIR (Cherbury, Beckenham, Kent).

The Extinction of the Bison.—The Report of the Secretary of the Smithsonian Institution at Washington for the year 1887 refers to the

extraordinary difficulty with which specimens of the American Bison were obtained for the Museum. In 1886 it was noticed that the representatives of the species in the Museum were very defective, and it was decided to secure at once, before the animal was wholly exterminated, a complete series of fresh skins and skeletons. The chief taxidermist was directed to set to work forthwith; but his enquiries were met by the assurance that the "Buffalo" were all gone except in the Yellowstone Park. Eventually reports were received that a few remained in Montana and a few in Texas. It was decided not to wait for the ordinary hunting season, but to start without delay. About seventy-five miles N.W. of Miles City, Montana, a herd of fifty to sixty "Buffalo" was discovered. The residents along the Missouri and Yellowstone Rivers were quite ignorant of the existence of the herd in these wild and uninhabited regions, and it had found safe shelter there ever since the destruction of the great northern herd in 1881—83, and was breeding in fancied security. But the settlement of the country by ranchmen which had just taken place doomed every one of these animals to destruction, and the sequel showed that the Smithsonian officials were only just in time to secure a few specimens. Three were taken in this expedition, and later in the year twenty-two more were killed and preserved. The skins and skeletons thus secured are described as being now "of almost priceless value" when the last of the *Bos americanus* is practically destroyed. So rapidly are the great game animals of the United States disappearing, that "it is a sad certainty that in a very few years the Elk, or Wapiti, Mountain Sheep, Goat, Deer, Moose, and other forms will have totally disappeared."

Hybrid between Goat and Sheep.—It has always been a matter of surprise to me that hybrids between Goat and Sheep have not been produced in this country, but I have sought for them in vain for many years. In the Jardin d'Acclimatation in Paris there are several such hybrids, presented by the Government of Chili; I saw four females and one male there. They are said to be a cross between a he-goat and an ewe, and the intermediate appearance which they present both in pelage and horn (the females are hornless) seems to confirm this report of their origin. The ram and two of the ewes are of a grey colour; the other three ewes are much darker, in fact nearly black; all have the legs black; the hair-like wool is divided into locks after the manner of that of long-woolled sheep; tails tolerably long and pendant, more resembling those of a Goat than Sheep.—J. JENNER WEIR.

[Mr. C. L. Sutherland, to whom we showed this note, has favoured us with the following addition to it;—"These hybrids are reported to be quite common in Chili and Peru, where they are called 'Chabins.' At Philadelphia in 1876 I was assured by the Commissioner of the Argentine Republican Government that they were commonly bred all through the Republic, and that the hybrids are perfectly fertile."—ED.]

Squirrels robbing Birds' Nests.—In reply to the enquiry of Mr. G. T. Phillips (p. 65), I can state from personal experience that Squirrels are among the worst enemies of small birds, devouring both their eggs and young ones. The gamekeepers at Coollattin unanimously agree in condemning them on account of their egg-eating propensities. The work of a Squirrel may be always distinguished from that of a Magpie. The latter almost invariably makes a clean sweep of the contents of a nest, either swallowing the eggs on the spot if they are small enough, or else carrying them away to a distance, one by one, and sucking them. If there are young ones in the nest they are taken in the same way, no remains in either case being left about or near the nest, unless the parent birds offer a valiant resistance, and the eggs get broken in the struggle. But a Squirrel is not nearly so adroit in the management of a robbery, and generally contrives to spill some of the contents of the eggs, besides leaving the broken shells in the nest, or portions of the young birds, if they happen to be the victims. Nevertheless, I am of opinion that Squirrels do not make food of this kind a regular object of search, as the Magpie does when it has a family to support.—ALLAN ELLISON (Trinity College, Dublin).

Bank Vole in Suffolk.—The following fact relating to the Bank Vole may perhaps be worth recording:—Last spring, being in want of a pair of these animals, I accordingly set some traps in their haunts; and during the month of May and part of April caught twelve males in succession, before a single female could be induced to enter any one of the traps. Nor is it at all likely that any of them were caught more than once, for though nearly all were set at liberty, they were taken to a distance before being released.—G. T. ROPE (Blaxhall, Wickham Market).

BIRDS.

Linnet nesting in October.—An instance of the late nesting of the Common Linnet, *Linota cannabina*, has lately come to my knowledge. A keeper was ferreting on the downs near Brighton on October 28th, when a small bird flew from a piece of furze near him, and upon looking into the bush he was surprised to find a nest of the Linnet containing four eggs. As the bird appeared to be sitting he did not disturb it, but visited it again in a few days, when he found the bird still sitting. At this date there was some very rough weather, and on going to the place a few days later he found the nest had been forsaken, and one of the eggs broken. He then brought the nest to me. It was a well-built nest, but the eggs are small.—C. BRAZENOR (Brighton).

Parrot Crossbill in Devonshire.—I have had an opportunity of examining two specimens of the Parrot Crossbill, shot out of a large flock at Marley, near Exmouth, during the first week of the current month

(January, 1888). Their large size and thick beaks at once attracted my attention, and, having carefully measured them, I have no doubt of their being examples of *Loxia pityopsittacus*. Their dimensions agree exactly with those of this species given in Yarrell's 'British Birds' (4th ed. vol. ii. p. 210). Their bills at the base are quite one-fifth of an inch higher than those of some half-dozen specimens of *L. curvirostra* which I have measured, and coincide perfectly in form and size with that of a specimen of *L. pityopsittacus*, said to have been obtained in Kent, forming part of the collection of Mr. Bower Scott, of Chudleigh, now in the Albert Memorial Museum, Exeter. They are both in fine red plumage, though one has some bright yellow feathers sprinkled over it. The only previously recorded occurrence of this species in Devon is that given by Dr. Moore, in his list of Birds published in Rowe's 'Perambulation of Dartmoor' (page 232), where Mr. Newton is said "to have shot nine near Millaton in 1838.—W. S. M. D'URBAN (10, Claremont Terrace, Exmouth).

The Distribution of the Jay in Ireland.—The restricted distribution of the Jay in Ireland is very curious. Kilkenny and Queen's County, with parts of the adjacent counties of Carlow, Kildare, King's County, and Tipperary will perhaps include the whole of its range in the island. In Kilkenny, Inistioge and Gowran; in Queen's County, Portarlinton and Abbeyleix may be mentioned as localities much frequented by this bird. In Kildare, where a correspondent in the January number of 'The Zoologist' (p. 32) asks whether it is to be found, it is common in the neighbourhood of Monasterevin. There can be little doubt that the Jay was formerly more numerous and widely distributed in this country than it is at present, and it may possibly at no very distant date become extinct as an Irish species. In this neighbourhood, and I think in any part of Wicklow, it only occurs as a rare visitor, some six or seven specimens only having been shot or observed here within the last ten years, though within the memory of the present generation it was a regular inhabitant of our woods. Reports of the occurrence of Jays must be accepted from the country people with caution, as the name is constantly misapplied by them to the Missel Thrush.—ALLAN ELLISON (Shillelagh, Co. Wicklow).

Starlings in Ireland.—With reference to Mr. Allan Ellison's observations (p. 16) on Starlings and other birds last year in Ireland, I may say that Starlings have never been so abundant here in South Wexford as they are this year. Every evening between 4 and 6 o'clock they fly over, in large and numerous flocks, on their way to a favourite roosting-place close to this. The noise of their wings is, as your correspondent remarks, like the "sound of a distant torrent." The flocks often come over almost continuously, and the other night I counted about twenty-five flocks in about ten minutes. They may be seen gathering together and starting at places seven miles from

this. Redwings, on the contrary, are not very abundant, and I have seen only one large flock of them this year. Golden Plover are decidedly scarce.—G. E. H. BARRETT-HAMILTON (Kilmanock, New Ross, Co. Wexford).

The Great Black Woodpecker in Berkshire.—I have much pleasure in recording what I take to be an undoubted occurrence of this rare British bird, *Dryocopus martius*, in Berkshire. My friend Capt. F. G. Coleridge, of Twyford, recently informed me that about seven years ago the attention of his wife and himself was suddenly called to the presence of a large black bird with red head in a fruit tree in his garden. Capt. Coleridge got within twenty yards or so of the tree, and had a good opportunity of examining the bird. He describes it as of the size of a Jackdaw, black with red crown. It was tapping away at a dead bough on the fruit tree. I have not the slightest doubt that it was a veritable Great Black Woodpecker. Captain Coleridge is acquainted with all our common British birds, and knows the other Woodpeckers perfectly well. He is also most unlikely to have made a mistake on this occasion, as his father's collection—familiar to him from boyhood—contained two stuffed specimens of *D. martius*.—SAVILE G. REID.

Food of the House Sparrow.—The following remarks on some of the points mentioned in the notice of Mr. J. H. Gurney's pamphlet on the "Misdeeds of the House Sparrow" (Zool. 1887, p. 390), may perhaps be worth publishing:—When collecting insects I have frequently seen Sparrows eagerly chase moths that were disturbed, and pick them from fences and other places where they rest during the day. For several years some gardeners have taken their meals in a tool-shed, from whence they have been accustomed to scatter crumbs to a number of House Sparrows that collect around the entrance. When the fire was lighted the smoke drove out the moths, often a considerable number, which had taken shelter there, and as they flew out a great many were captured and eaten by the Sparrows waiting outside, who seemed to look out as much for them as for the crumbs. Several times some moths that were caught and pinned for me were carried off by the Sparrows, and on one occasion a Poplar Hawk Moth, *Smerinthus populi*, that I had killed and pinned on the window-frame was carried off by a Sparrow, leaving the pin sticking in the wood. Once I saw a Sparrow trying for some time to dislodge a full-grown larva of the Eyed Hawk Moth, *S. ocellatus*, and had nearly killed it when I disturbed it. A friend of mine once saw a Sparrow making repeated visits to a gooseberry-bush, returning to its nest with something in its beak, which on closer examination proved to be small caterpillars with which the bush was infested. In answer to Mr. Gurney's request for evidence of their eating the Crane-fly (or "daddy-longlegs"), I have often seen Sparrows with these insects in their beaks with which to feed their young. In the Cemetery here the Sparrows destroy a great number of these insects, and I have often seen several birds at a time confining themselves solely to the pursuit of Crane-

flies, chasing them over the long grass, and picking them off the stones and places where they rest, some of the birds carrying away the bodies to feed their young ones.—JOSEPH VINE (11, Chester Road, South Highgate).

Addition to the Avifauna of the Færoe Islands.—Herr H. C. Müller, of Thorshavn, informs me that a male example of the Caspian Tern, *Sterna caspia*, was shot on Sorvaag-vatn, Island of Vaagoe, on the 10th May, 1887. The specimen has been reserved for my collection.—H. W. FEILDEN.

Cuckoo in India.—Referring to the note under this heading (p. 25), I may state that I resided many years in Ceylon, and drew most of its birds, but never saw or heard of the English Cuckoo visiting that country. There are several species of Cuckoo in Ceylon, but the call of none of them resembles that of our Cuckoo.—E. L. MITFORD (Henfaes, Dolgelly).

The occurrence of *Serinus canicollis* near Brighton.—On Jan. 27th a second example of *Serinus canicollis* was obtained at Ovingdean, near Brighton. The present specimen is a male, in perfect plumage, with sharp claws, and showing no signs of captivity whatever. As this species has again been taken it seems to indicate that it does occasionally reach our shores; that two birds should have escaped and both been retaken is most improbable. The question is, to find out, if possible, the line of passage from its distant African home.—R. W. CHASE (Edgbaston, Birmingham).

Little Bustard in Co. Mayo.—It may interest the readers of 'The Zoologist' to hear that another Irish specimen of the Little Bustard, *Otis tetrao*, Linn., has recently been obtained. It was shot last December in Co. Mayo. This is the third time the bird has been caught in Ireland. The two previous records were both from the southern counties, while this is its first occurrence in any of the northern ones. The bird is at present in the Irish collection of the Science and Art Museum.—ROBERT F. SCHARFF (Curator Nat. Hist. Department, Science and Art Museum, Dublin).

Varieties of the Brambling.—We have some Bramblings alive, two of which were in the normal plumage when netted. One has since assumed a white chin, and many white feathers about the head and neck; the other has some brown patches on the breast, apparently a case of incipient melanism. They are both hens.—J. H. GURNEY, jun. (Keswick, Norwich).

Correction of an Error.—In 'The Zoologist,' last year (p. 113), I stated that a hybrid between a Bullfinch and Canary had been exhibited at the Crystal Palace. Although such a bird was entered, it was not exhibited. This oversight on my part has been courteously pointed out to me by the Rev. H. A. Macpherson.—J. JENNER WEIR (Beckenham).

FISHES.

Flounder coloured on both Ventral and Dorsal Surfaces.—On Jan. 16th last I received from Sennen Cove, near the Land's End, a specimen

of *Pleuronectes flesus*, taken in deep sea-water, which was coloured on both surfaces, and of a more mottled appearance than usual. The only peculiarity I observed was that the lateral line was much more highly arched over the pectorals than is generally found to be the case.—THOMAS CORNISH (Penzance).

PROTRACHEATA.

A forgotten Species of Peripatus.—In no account of the species of *Peripatus* does any writer ever make a reference to a species described by Prof. Schmarda, in his 'Zoologie,' under the name of *P. quitensis*; in the second edition of this Handbook, which is now lying before me, the species is figured on p. 76 of vol. ii. It is stated to come "vom äquatorialen Hochland Südamericas," and with a total length of 26 mm. it has thirty-six pairs of appendages. It is much to be desired that attention should be called to this species, so that travellers in or near the neighbourhood of Quito may make a careful search for it. It is only by repeatedly directing attention to the existence of these rare and not always easily found creatures that we can hope to obtain them. My persistency in appealing to Mr. E. P. Ramsay has been lately rewarded by the arrival of *P. leuckarti*, which has been found near Wide Bay, Queensland.—F. JEFFREY BELL (*in Report of the British Association*, 1887).

SCIENTIFIC SOCIETIES.

LINNEAN SOCIETY OF LONDON.

February 2, 1888.—W. CARRUTHERS, F.R.S., President, in the chair.

Dr. William Schlich, Mr. Isaac Thompson, and Mr. W. S. McMillan were formally admitted Fellows of the Society.

The President called attention to the loss which the Society had sustained by the deaths of Professor Asa Gray, Professor Anton de Bary, and Mr. Irwine Boswell (formerly Syme), which had occurred since the last meeting, and gave a brief review of the life and labours of each.

Mr. C. T. Druery exhibited a collection of abnormal British Ferns, and made some remarks on the extraordinary number of named varieties which had been recognised, and which now required to be carefully examined and compared with a view to some systematic arrangement of them.

Dr. Amadeo exhibited and made some observations on a new species of *Tabernaemontana*.

A long and interesting paper was then read by Mr. Henry T. R. Blandford on the Ferns of Simla, based upon a collection which he had himself

made there "not much below 4500 feet, nor above 10,500 feet." His remarks were illustrated by a map, and by the exhibition of a number of the more noticeable ferns collected, many of which were extremely beautiful. Criticisms were offered by Mr. C. B. Clarke, Mr. J. S. Gamble (Conservator of Forests, Northern Circle, Madras), and Dr. William Schlich (Inspector-General of Forests to the Government of India).

A paper was then read by Mr. J. H. Veitch on the fertilization of *Cattleya labiata*, var. *Mossiae*, in which he detailed the results of experiments he had made, illustrating the various stages by a series of delicate drawings executed by Mr. Berjeau, several of which were enlarged and treated diagrammatically for the better explanation of the observations made.

The next paper, by Mr. J. S. Baly, contained descriptions of new species of *Galerucinae*, and being of a technical nature was taken as read.

Feb. 16, 1888.—WM. CARRUTHERS, F.R.S., President, in the chair.

Announcement was made of an acceptable donation of books to the Library by the widow of the late Dr. John Millar, Fellow of the Society, recently deceased, and a unanimous vote of thanks was accorded.

Mr. Spencer Moore exhibited, and made some remarks upon, specimens illustrative of the *Palmella* state of *Draparnaldia glomerata*.

Mr. D. Morris (Royal Gardens, Kew) exhibited a piece of wood of *Hieronyma alchoroioides* received from Trinidad, showing in its fissures mineral deposits which on chemical analysis proved to be calcic carbonate. For comparison Mr. Morris also exhibited and commented upon some deposits of calcic phosphate in teak. Some of these (described by Sir Frederick Abel, Quart. Journ. Chem. Soc. xv. 91) are 6 ft. in length, 6 in. in breadth, and from $\frac{1}{8}$ in. to $\frac{3}{8}$ in. in thickness. Deposits in bamboo known as "tabasheer" (silicate) were shown; as also pearls (carbonate of lime) from cocoa-nuts, received from Dr. Sydney J. Hickson (see 'Nature,' vol. xxxvi. p. 157). All these specimens were from the Museum of Economic Botany at Kew.

Dr. Burn Murdoch exhibited and offered remarks upon the intra-marginal (so called) veins in the section *Areolata* of the genus *Erythroxyton*, of which *E. coca* is the most familiar species. These lines are due to a thickening of the parenchymatous tissue which takes place in the bud stage, and are in no way connected with the venation of the leaf.

Mr. G. F. Sherwood exhibited a collection of photographs taken in Samoa, illustrating the scenery and people, together with a number of necklets formed with strings of various bright-coloured seeds.

The first paper of the evening was by Mr. H. N. Ridley on self-fertilization and cleistogamy in Orchids. Three common methods of self-fertilization were explained:—(1) by the breaking up of the pollen mass and falling of the dust either directly upon the stigma, or into the

lips, whence it comes into contact with the stigma; (2) by the falling of the pollen masses as a whole from the clinandrum into the stigma; and (3) by the falling forward of the pollinia from the clinandrum or the anther cap, the caudicle and gland remaining attached to the column. An interesting discussion followed, in which Prof. Marshall Ward, the Rev. G. Henslow, and Mr. A. W. Bennett took part.

A paper was then read by Dr. John Rae, entitled "Notes on some of the Birds and Mammals of Hudson's Bay Territory." Dr. Rae, whose long residence in Northern and Arctic America enabled him to speak authoritatively from personal observation, gave an interesting account of the migrations of the Canada, Snow, and Blue-winged Geese, and of the habits of the American Hare and Lemming. He particularly referred to the belief entertained by some of the Indian tribes he had met with (and to which he himself gave credence) that certain species of small birds are assisted on their migrations by being carried on the backs of Canada Geese.

Mr. J. E. Harting, in criticising this paper, gave an exposition of the views held by American ornithologists on the subject of the American, Canada, and Snow Geese, their relationships and nomenclature, and pointed out that the story of small birds being carried by larger ones is not confined to North America, but is current in South-Eastern Europe, Palestine, and Arabia, where reliable evidence has been obtained that Wagtails and other small birds travel on the backs of Cranes. He added that one instance was known to him of such an occurrence in England, a Short-eared Owl having been seen to arrive on the north coast of Yorkshire carrying on its back a Golden-crested Wren, which was secured by the observer (see 'Zoologist,' 1882, p. 73). The meeting then adjourned to March 1st.

ZOOLOGICAL SOCIETY OF LONDON.

February 7, 1888.—Professor W. H. FLOWER, C.B., LL.D., F.R.S., President, in the chair.

The Secretary read a report on the additions that had been made to the Society's Menagerie during the month of January, 1888.

Mr. E. G. Loder exhibited and made remarks on a large tusk of the African Elephant, which measured 9 ft. 5 in. in length, and weighed 184 lbs. It was, he believed, the largest Elephant's tusk hitherto recorded, and its extraordinary size might perhaps be accounted for on the supposition that the animal which carried it had (as sometimes happens) only one tusk.

Mr. A. Thomson exhibited a living specimen of the larval form of Stick-Insect, *Empusa pauperata*, from the Insect House.

Mr. G. A. Boulenger read the third of his series of contributions to the herpetology of the Solomon Islands. The collection now described had been

obtained by Mr. C. M. Woodford during a visit to the islands of Guadalcanar and New Georgia. The author observed that though the collection contained over 200 specimens, only four species were thereby added to the herpetological list of the Solomons, showing that our knowledge of the fauna was approaching completion.

A communication was read from Mr. Arthur G. Butler, containing descriptions of some new Lepidoptera from Kilima-njaro. Some of the specimens described had been collected by the late Bishop Hannington, and others by Mr. F. J. Jackson.

Mr. Frank E. Beddard read a paper upon certain points in the visceral anatomy of the *Lacertilia*. The paper dealt principally with *Monitor*, in which the presence of a peritoneal fold covering the abdominal viscera and separating them from the lungs was referred to; this membrane was compared with a corresponding structure in the *Crocodylia*.

Mr. D. D. Daly gave an account of the Birds'-nests Caves of Northern Borneo, of which no less than fifteen were now known to exist in different parts of the North-Bornean Company's territories. Most of these were situated in limestone districts in the interior, but two of them were in sandstone formations near the sea-coast.

A communication was read from Mr. R. Bowdler Sharpe, containing the description of a new species of Tyrant-bird of the genus *Elainea*, from the Island of Fernando Noronha. This was proposed to be called *E. ridleyana*, after Mr. H. N. Ridley, who had obtained the specimens described during his recent exploration of that island.

Mr. Osbert Salvin read a note on *Ornithoptera victoriae*, from Guadalcanar Island of the Solomon group, and pointed out the characters which separate this species from a closely-allied form of the Island of Maleite, proposed to be called *O. reginae*.—P. L. SCLATER, *Secretary*.

ENTOMOLOGICAL SOCIETY OF LONDON.

February 1, 1888.—Dr. DAVID SHARP, F.Z.S., President, in the chair.

The President nominated Sir John Lubbock, Bart., M.P., F.R.S., Mr. Osbert Salvin, M.A., F.R.S., and the Rt. Hon. Lord Walsingham, M.A., F.R.S., Vice-Presidents for the Session 1888 to 1889.

Mr. Henry F. Dale, F.R.M.S., F.Z.S., of Miserden, Gloucestershire, and 2, Savile Row, W., was elected a Fellow.

Mr. F. Pascoe exhibited two specimens of a species of the Hemipterous genus *Ghilianella*, one of which he found crawling over a low bush at Pará with the young larva securely riding on its back. He said it was the only occasion he ever saw the species with the larva, which was new to Mr. Bates.

Dr. Sharp exhibited some insects forwarded to him by Mr. Kidston, of Stirling, collected by Mr. Alexander Carson on Kavalla, an island in Lake Tanganyika; they were sent in spirit, and unfortunately were much damaged in transit. The Coleoptera were nearly all well-known species, exemplifying the fact that many of the commoner insects of tropical Africa have wide distribution there, some of these species being common in Natal and Senegal. The most remarkable of the insects received from Mr. Carson was a large lepidopterous caterpillar, which Dr. Sharp had given to Mr. Poulton; it was covered with very thick sharp spines, all pointed except the terminal one in the mesial line, which was furcate.

Mr. Champion exhibited specimens of *Casnonia olivieri*, Buq., *Ædichirius unicolor*, Aubé, *Paussus favieri*, Fairm., *Colyidium elongatum*, Fab., *Endophleus spinulosus*, Latr., *Heterius arachnoides*, Fairm., *Pseudotrechus mutilatus*, Rosenh., *Singilis bicolor*, Ramb., *Phyllomorpha laciniata*, Will., all recently collected by Mr. J. J. Walker, R.N., of H.M. ship 'Grappler,' at Gibraltar, Tetuan, and Tangier.

Mr. R. South exhibited a remarkable variety of *Polyommatus Phleas*, caught by him in North Devon in 1881.

Mr. R. W. Lloyd exhibited a living specimen of a species of *Ocnere* taken in London amongst merchandise imported from Ispahan.

Mons. A. Wailly exhibited, and read notes on, a number of cocoons of *Antheræa assamensis*, *A. roylei*, *Actias selene*, *Attacus ricini*, &c., lately received from Assam; also a number of nests of cocoons of *Bombyx rhadama*,—the silk of which is used by the Hovas in the manufacture of their stuffs called "Lambas,"—from the island of St. Mary, Madagascar.

Mr. H. J. Elwes read a paper on "the Butterflies of Sikkim," the result of many years of collecting in that wonderfully rich district of the Himalayas. He said he had been enabled to complete his observations during the enforced delay at Darjeeling of Mr. Macaulay's Mission to Tibet, of which he was a member. He stated the number of species occurring in this small district to be about 530, which is greater than the number hitherto found in any locality in the Old World. Of these the greater part only occur in the hot valleys at an elevation of 1000 to 3000 feet, and these are for the most part of a purely Malayan character, whilst those found in the middle zone are in many cases peculiar to the Himalayas; and the few species from the alpine parts of the country at 12,000 to 16,000 feet are of a European or North Asiatic type. An important feature in this paper was the numerous observations taken on the habits, variation, seasons of appearance, and range of altitude at which the various species occur, for which Mr. Elwes said he was largely indebted to Herr Otto Möller, of Darjeeling. The paper concluded with an analysis of the species and genera as compared with those found in the North-West Himalayas and in the Malay Peninsula.—H. Goss, *Hon. Secretary*.

NOTICES OF NEW BOOKS.

The Birds of Wiltshire: comprising all the Periodical and Occasional Visitants, as well as those which are Indigenous to the County. By the Rev. ALFRED CHARLES SMITH, M.A., Rector of Yatesbury. 8vo, pp. 588. London: R. H. Porter; and Devizes: H. F. Bull. 1887.

BETWEEN the years 1857 and 1869 the author of the present volume contributed to the pages of 'The Wiltshire Magazine' a series of articles on the Ornithology of Wiltshire. Separate copies of these collected into a bound volume we have long possessed, and frequently consulted; but so many years have elapsed since their publication, that we have often wished for their republication in a revised and improved shape. Our wish has at length been gratified, and we have now before us a goodly volume, containing more than double the number of pages which originally appeared. Upon this we think Mr. Smith is to be heartily congratulated; for although in his Preface he has modestly characterized his book as "a plain account of the Birds of Wiltshire, written by a Wiltshire man and for Wiltshire people," it is to be hoped, and indeed expected, that it will find its way far beyond the confines of the county in which it has been written.

When the author expressed a fear (Preface vii) lest he may be thought to have "put forth a treatise which might have been written fifty years ago," and be considered "somewhat old-fashioned," he has, consciously or unconsciously, indicated one of the weak points in the volume. For his views on classification must be admitted to be somewhat "behind the age," and his long disquisition on the structure of birds seems to us to be out of place in a county avifauna. On several very well-known species he has written at too great a length, and on others of much rarer occurrence he tells us less than might well be told. But on the whole we have a very pleasantly written volume, in which are noted many details respecting the occurrence in Wiltshire of sundry rare British birds, which cannot fail to be of interest to ornithologists generally. Some of these have, perhaps, been included on too slender evidence; as, for example, the Roller, *Coracias garrula* (p. 293), which

is stated to have been only seen once, and not procured; and the Capercaillie, *Tetrao urogallus*, which is included in the list (p. 325) on the strength of the occurrence of a single specimen at Winterslow, in 1841, which was supposed to have escaped from Mr. Baring's park, where several have been introduced. Two other species should be expunged from the list, namely, the King Duck, *Somateria spectabilis* (p. 485), and the Cayenne Rail, *Aramides cayennensis* (p. 445).

The records of the former nesting haunts of the Kite in Wiltshire are interesting now that this bird has ceased to breed there, and has become so scarce in other parts of England. At one time it would seem to have been not uncommon in the county, and is known to have nested in Clarendon Woods, at Lavington, Martinsell, Fiddington Down, and West Lavington. At Lydiard Millicent, the seat of Lord Bolingbroke, there was a tree, perhaps still in existence, called the "Kite-tree," where these birds had a nest from time immemorial, and where they might always be seen in the spring only "a few years ago." There is also a wood lying between the villages of Erchfont and Potterne, still known as "Kite Wood," which doubtless was originally so-called from its having been formerly a breeding haunt of this fine bird.

The nesting of Montagu's Harrier in Wiltshire is another fact of interest to which due importance is attached (p. 96). The author was informed by Mr. Tyndall Powell that a pair of old birds of this species, and two young ones now preserved at Hurdcott, and other young birds preserved at Sutton Veny, were taken from his rabbit-warren above Fifield Bavant, and had their nest in the gorse where they were shot and trapped.

That very local little bird, the Dartford Warbler, is noted (p. 166) as remaining throughout the year in Wiltshire, where it has been observed, and specimens procured, at Amesbury and Chippenham, as well as on the downs at Mere, where some are almost certain to be roused from the gorse when the hounds are drawing cover.

"Seen against a dark hill-side or a lowering sky, a flock of Snow Buntings presents an exceedingly beautiful appearance; and it may then be seen how aptly the term 'Snow-flake' has been applied to the species. No more pleasing combination of sight and sound can be afforded than when a cloud of these

little birds, backed by a dark grey sky, descends, as it were, in a shower to the ground, to the music of their own sweet tinkling notes." According to Mr. A. C. Smith, the Snow Bunting "seldom comes so far south as Wiltshire;" but it would perhaps have been more correct to write that it has been "seldom observed in Wiltshire," for in Devonshire it is frequently met with in winter on the Dawlish Warren, and on Dartmoor, and is a regular winter visitant to many parts of Cornwall. In Dorset, Hants, and Sussex also, it is equally well known at that season of the year.

The Cirl Bunting, as might be expected, has been found to occur all over Wiltshire, and to breed in many parts of the county; and Yarrell is undeservedly taken to task for stating that "it is generally found on the coast, and does not often appear to go far inland." But this statement, which occurs in the third edition of the 'History of British Birds,' is not to be found in the fourth and latest edition of that standard work, a reference to which would have saved Mr. Smith the trouble of penning this and similar criticisms which are no longer applicable, and from repeating *ipsissimis verbis* stories which have long ago been shown to have been founded in error. As an example of this, we may refer to his repetition of the story that Sir Thomas Monson, in the reign of James I., gave £1000 for a cast of falcons, a misapprehension of the facts which has long ago been explained. (See 'The Zoologist,' 1880, p. 282).

On the subject of that commonest of all birds, the House Sparrow, Mr. Smith writes:—

"In many of the Churchwardens' Account Books may be seen as a considerable item of the Church-rate annually, and for very many years past, so many dozen Sparrows destroyed at so much per dozen, the price varying according to the maturity or immaturity of the victims. Thus in an old 'Churchwardens' Book' belonging to my small parish, dating from above 100 years ago, I find the items every year of from 20 to 90 dozen old Sparrows at fourpence the dozen, and from 10 to 70 dozen young birds at twopence the dozen; and these, with an occasional shilling for the capture of a Fox, a groat for a Polecat, and an occasional sixpence given to a sailor, seem to have formed the principal part of the church expenses of the good parish of Yatesbury for above 100 years,—so lightly did the church-rate sit upon our forefathers,—and this continued to within forty years ago, when my predecessor considered Sparrow-killing scarcely

a legitimate church expense. * * * * Two observations strike me in perusing these pages, *viz.* the great abundance of Foxes, Polecats, and such like vermin, and the paucity of Sparrows 100 years ago as compared with later entries; for whereas in the middle of the last century 4 Foxes, 6 Polecats, and 30 dozen Sparrows seem to have been the annual tale of the slain, at the beginning of the present century 2 Foxes, 1 Polecat, and 60 dozen Sparrows form the average sum total. But the last entry recording such items, *viz.* A.D. 1840, shows that whereas Foxes and Polecats are exterminated from the parish, as far as their persecution by church-rate is concerned, no less than 178 dozen Sparrows met with an untimely end in that year; proving that, notwithstanding the persecution raised against them, Sparrows still increase upon us, and have enormously increased since the universal destruction of so many of our birds of prey, for whose behalf they seem in great part to have been provided."

Is there any satisfactory evidence to support the statement (pp. 39 and 199) that the Hawfinch feeds on the kernels of haws and stonefruits, plums, cherries, &c.? Knowing from experiment how difficult such stones are to crack between strong sound teeth, we are somewhat sceptical as to the asserted superior powers of *Coccothraustes vulgaris*. This bird, according to our author, breeds in Savernake Forest, and at Earlstoke and Warminster, notwithstanding the statement of Mr. Seebohm ('British Birds,' vol. ii. p. 57) that "no reliable accounts of its nesting in the western counties are to be found."

The occasional appearance of the Chough in Wiltshire (four instances of its occurrence are mentioned) is noteworthy, and shows that this bird, if not in the strict sense migratory, at all events wanders sometimes to a considerable distance from its natural haunts. An excellent account is given of the Raven (pp. 218—232), concerning which bird the author has made careful enquiry in every part of the county, and has received a good deal of information, negative as well as positive, from no less than 110 correspondents. The evidence of two generations of keepers is adduced to show that Ravens do not destroy the eggs of game.

The former existence of Black Game in Wiltshire (p. 327), and the occasional appearance in the county of wandering Red Grouse, supposed to be stragglers driven before the wind from Wales (p. 329), are matters of interest to sportsmen as much as to naturalists. So also is the information given about the Red-

legged Partridge, which is by no means a common bird in the county, but which is gradually extending its range westward. Mr. Smith expresses satisfaction at its scarcity, because he believes that its encouragement in some districts of England has ended in driving away its more valuable congener, the Grey Partridge; but although we have often heard this statement made, we have had no personal experience of the fact. On the contrary, we have so often found the two species together in the same field of roots during the shooting season, and have so frequently heard of their laying in the same nest (one such case is mentioned in the book before us), that we entertain a better opinion of the "Red-leg" than it is said to deserve. Every sportsman, of course, knows how these birds will run on being approached, and how sorely on this account they try the patience of men and dogs; but every experienced Partridge shooter must also admit that when, later in the season, recourse is had to "driving," the Red-legs show undeniable sport. On this account, if on no other, we would discourage the destruction of their eggs, which some people choose to advocate. We fail, moreover, to note the alleged inferiority of flavour which this bird is said to possess in comparison with the Grey Partridge. When both are roasted the difference is certainly perceptible; but in a properly made game-pie, or stewed with celery, or in a *salmi aux champignons*, the Red-leg is a game-bird not by any means to be despised.

But to return to our author. We can scarcely say that we are disappointed at finding no evidence to support a previously made assertion that the Curlew (*Numenius arquata*) breeds on the Wiltshire Downs; for we have long ago recorded our dissent from such a view ('Zoologist,' 1877, p. 38), and expressed the opinion that the bird in question must be the Stone Curlew, *Ædicnemus crepitans*. But inasmuch as the Rev. A. P. Morres, of Britford Vicarage, Salisbury, professed to have good reasons for believing the story to be true ('Zoologist,' 1877, p. 106), we have been content to wait for satisfactory proof, and in search of it have naturally turned to the volume before us. But the author, although quoting Mr. Morres's views, admits that he himself has "no positive proof to bring forward," and has unaccountably overlooked the more recently published statement by Mr. Morres in one of a series of articles on "Birds in the Neighbourhood

of Salisbury";* wherein he says, "I had been often told that these birds bred occasionally on our downs, and was promised some eggs by a person who unhesitatingly affirmed so; but when they were sent, they turned out to be the eggs of the Stone Curlew or Norfolk Plover, as I had all along imagined they would be found to be."†

But the Wiltshire bird, *par excellence*, around which the greatest interest centres is, of course, the Great Bustard, now, alas! extinct in this country as a breeding species, but once not uncommon upon the open downs of Wiltshire and Berkshire, the wide heaths of Norfolk, and the wolds of Lincolnshire and Yorkshire. Dr. Thomas Muffett, who lived at Bulbridge, in Wiltshire, in Elizabeth's time, and died in 1590, tells us in his quaintly written work, 'Health's Improvement,' that "in the summer, towards the ripening of corn, he has seen half a dozen of these great birds lie in a wheat field (as a deer will do) with ease and eating; whereupon they would grow sometimes to such a bigness that one of them would weigh almost fourteen pounds." Chafin, also, in his 'Anecdotes and History of Cranbourn Chase,' describes very graphically how, in 1751, he encountered on the Wiltshire downs, near Winterslow, a flock of twenty-five Great Bustards, which he pursued for some distance on horseback in an unsuccessful attempt to overtake and shoot one. Strange to say, neither of these authors are referred to in the volume before us. This is to be regretted; for such positive evidence as theirs, on the subject of a species now so rarely seen in Wiltshire, is too important to be omitted in a book dealing exclusively with the birds of that county.

At page 4 of his "Introduction," Mr. Smith gives a comparative table of the number of species observed in different counties (Cornwall, Lincolnshire, Lancashire, Somersetshire, Middlesex, Sussex), and remarks that out of 199 different kinds of British land-birds mentioned in the latest edition of Yarrell, 133 have been met with in his county, while out of 176 water-birds accredited to the British Islands, Wiltshire (with no sea-coast) can claim to have harboured at one time or another no less

* 'Wilts Archæol. & Nat. Hist. Mag.' 1883.

† Mr. Morres by this time (1883) had forgotten his former anxiety to include *Numenius* as a breeding species amongst the Birds of Wiltshire, cf. Zool. 1877, p. 106.

than 102; the total number of species for the county being thus raised to 235, or about twenty more than have been met with in the adjoining county of Somerset, washed by the waters of the Severn and the Bristol Channel. This may, perhaps, be considered to prove that Wiltshire lies right in the course taken by most of the birds which migrate to and from countries further north; but it also testifies very plainly to the powers of observation exercised by the men of Wiltshire, and by none more successfully than the author of this agreeable volume.

The Journal of Morphology. Edited by C. O. WHITMAN, with the co-operation of E. P. ALLIS, JUN. Vol. I., No. 1, pp. 226. Boston: Ginn & Co. 1888.

AMERICAN morphologists are to be congratulated on the appearance of a journal especially devoted to their new science in their own country; though we have no right to complain that such has not existed before, for it is owing to its absence that the 'Philosophical Transactions,' the 'Quarterly Journal of Microscopical Science,' and the 'Journal of Anatomy and Physiology' have been enriched by valuable communications from American workers. Patriotism, however, is by no means incompatible with a devotion to scientific pursuits, and Americans themselves must have felt ashamed of being without a periodical of this character. The appearance of the first number is very handsome, and the plates are good. Prof. Ramsay Wright and Mr. Macallum, of Toronto, lead off with an interesting account of the remarkable Trematode Worm, *Sphyrnanura osleri*, which is parasitic on the Menobranch (*Necturus lateralis*); there are then communications on arthropod eyes, two of which are by Mr. Patten, who is by no means in accord with some preceding observers; embryology is represented by an account of the germ-layers of *Clepsine*, by Prof. Whitman, and a preliminary notice on the development of *Lumbricus* by Prof. Wilson; these are very important contributions. Dr. Baur has an essay on the phylogenetic arrangement of the Sauropsida, which, to the eye of a purist, is disfigured by the term Sauromammalia; Therosauria has, indeed, been used by Haeckel for a group of Dinosaurs, but as we have the terms Eutheria, &c., might we not have Saurotheria?

